

Appln. Serial No. 09/715,753
Amendment Dated February 16, 2005
Reply to Office Action Mailed December 16, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

- 1 1. (Cancelled)

- 1 2. (Previously Presented) A method of establishing communications between a base
2 station and a system controller over a network, comprising:
3 identifying a plurality of paths in the network, each path defined by an address in
4 the base station and an address in the system controller; and
5 selecting one of the plurality of paths to communicate data associated with a
6 given mobile station,
7 wherein selecting one of the plurality of paths comprises performing an implicit
8 negotiation in which the path is defined by a source address of a message communicated by the
9 base station and by a source address of a message communicated by the system controller.

- 1 3. (Original) The method of claim 2, wherein performing the implicit negotiation
2 comprises sending and receiving messages in a session having bi-directional data flow.

- 1 4. (Previously Presented) The method of claim 2, wherein the network is a
2 packet-switched, connectionless network, and wherein selecting one of the plurality of paths
3 comprises selecting one of a plurality of virtual connections on the packet-switched,
4 connectionless network, each virtual connection based on a base station address and a system
5 controller address.

- 1 5. (Currently Amended) The method of claim [[1]] 2, further comprising selecting
2 another path by sending a message from another source address.

- 1 6. (Original) The method of claim 5, wherein sending the message comprises
2 sending a UNITDATA message.

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1 7. (Currently Amended) The method of claim [[1]] 2, further comprising selecting
2 another path by sending a change-route request.

1 8. (Original) The method of claim 7, wherein sending the change-route request
2 comprises sending a General Packet Radio Service NS-CHANGEROUTE request.

1 9. (Original) The method of claim 7, wherein selecting another path by sending the
2 change-route request is part of an explicit path negotiation.

1 10. (Previously Presented) A method of establishing communications between a base
2 station and a system controller over a network, comprising:
3 identifying a plurality of paths in the network, each path defined by an address in
4 the base station and an address in the system controller;
5 selecting one of the plurality of paths to communicate data associated with a
6 given mobile station; and
7 selecting another path by sending a change-route request,
8 wherein selecting another path by sending a change-route request is performed
9 during a session having unidirectional data flow between the base station and the system
10 controller.

1 11. (Original) The method of claim 7, wherein sending the change-route request
2 comprises sending a request containing an identifier of a mobile station.

1 12. (Original) The method of claim 11, wherein the identifier comprises a General
2 Packet Radio Service temporary logical link identifier.

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1 13. (Previously Presented) A method of establishing communications between a base
2 station and a system controller over a network, comprising:
3 identifying a plurality of paths in the network, each path defined by an address in
4 the base station and an address in the system controller;
5 selecting one of the plurality of paths to communicate data associated with a
6 given mobile station; and
7 selecting another path by sending a change-route request,
8 wherein sending the change-route request comprises sending the change-route
9 request using a new source address, and wherein selecting the other path is based on the new
10 source address.

1 14. (Currently Amended) The method of claim [[1]] 2, further comprising:
2 disabling an address; and
3 sending a change-route request containing the disabled address to change a path
4 for each mobile station assigned a path defined by the disabled address.

1 15. (Previously Presented) A first system for use in a mobile communications
2 network, comprising:
3 a communications module adapted to communicate over a packet-switched
4 network coupled to a second system, the first system being one of a base station and a system
5 controller and the second system being another one of the base station and the system controller;
6 a storage element containing one or more first addresses associated with the first
7 system; and
8 a control module adapted to select one of plural paths over the packet-switched
9 network, each path defined by one address associated with the first system and one address
10 associated with the second system,
11 the control module adapted to select one of plural paths over the packet-switched
12 network by performing an implicit negotiation in which a path is defined by a source address of a
13 message communicated by the first system and by a source address of a message communicated
14 by the second system.

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1 16. (Previously Presented) The first system of claim 15, wherein the communications
2 module is adapted to communicate over a Gb interface provided in the packet-switched network,
3 wherein the plural paths are Internet Protocol (IP)-based virtual circuits of the Gb interface, each
4 IP-based virtual circuit identified by a unique combination of an IP address associated with the
5 first system and an IP address associated with the second system.

1 17. (Original) The first system of claim 15, comprising the base station.

1 18. (Original) The first system of claim 15, comprising the system controller, the
2 system controller comprising a serving GPRS support node.

1 19. (Cancelled)

1 20. (Previously Presented) The first system of claim 15, wherein each address
2 comprises an Internet Protocol address, and the control module is adapted to detect out-of-order
3 delivery of Internet Protocol packets in one of the paths over the packet-switched network
4 between the base station and the system controller.

1 21. (Original) The first system of claim 15, wherein each path is further defined by a
2 User Datagram Protocol port of the first system and a User Datagram Protocol port of the second
3 system.

1 22. (Original) The first system of claim 15, wherein the control module comprises a
2 load sharing task to select different paths for different mobile stations.

1 23. (Original) The first system of claim 15, further comprising a GPRS Network
2 Service layer, the Network Service layer comprising the control module.

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1 24. (Original) The first system of claim 23, further comprising an upper layer, the
2 Network Service layer exchanging primitives with the upper layer.

1 25. (Previously Presented) A first system for use in a mobile communications
2 network, comprising:
3 a communications module adapted to communicate over a packet-switched
4 network coupled to a second system, the first system being one of a base station and a system
5 controller and the second system being another one of the base station and the system controller;
6 a storage element containing one or more first addresses associated with the first
7 system;
8 a control module adapted to select one of plural paths over the packet-switched
9 network, each path defined by one address associated with the first system and one address
10 associated with the second system;
11 a GPRS Network Service layer, the Network Service layer comprising the control
12 module; and
13 an upper layer, the Network Service layer exchanging primitives with the upper
14 layer,
15 wherein the primitives comprise an NS-UNITDATA-Request primitive carrying
16 outbound data and an NS-UNITDATA-Indication primitive carrying inbound data, the NS-
17 UNITDATA-Indication primitive containing a remote link selector parameter, and the NS-
18 UNITDATA-Request primitive containing the remote link selector parameter and a local link
19 selector parameter.

1 26. (Original) The first system of claim 25, wherein the control module is adapted to
2 select an address associated with the first system based on the local link selector parameter.

1 27. (Original) The first system of claim 26, wherein the control module is adapted to
2 select an address associated with the second system based on the remote link selector parameter.

1 28.-36. (Cancelled)

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1 37. (Previously Presented) An article comprising at least one storage medium
2 containing instructions for establishing communications over a network between a base station
3 and a system controller, the instructions when executed causing a first node to:
4 identify a plurality of paths in the network, each path defined by an Internet
5 Protocol (IP) address in the base station and an IP address in the system controller, the first node
6 being one of the base station and system controller;
7 select one of the plurality of paths to communicate data associated with a given
8 mobile station; and
9 send a message to decommission an IP address of one of the base station and
10 system controller.

1 38. (Previously Presented) An article comprising at least one storage medium
2 containing instructions for establishing communications over a network between a base station
3 and a system controller, the instructions when executed causing a first node to:
4 identify a plurality of paths in the network, each path defined by an address in the
5 base station and an address in the system controller, the first node being one of the base station
6 and system controller; and
7 select one of the plurality of paths to communicate data associated with a given
8 mobile station,
9 wherein selecting one of the plurality of paths comprises performing an implicit
10 negotiation in which the path is defined by a source address of a message communicated by the
11 base station and by a source address of a message communicated by the system controller.

1 39. (Previously Presented) The article of claim 38, wherein the network is a packet-
2 switched, connectionless network, and wherein the instructions when executed cause the first
3 node to select one of the plurality of paths by selecting one of a plurality of virtual connections
4 on the packet-switched, connectionless network, each virtual connection based on a base station
5 address and a system controller address.

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1 40. (Original) The article of claim 37, wherein the instructions when executed cause
2 the first node to further select another path by sending a message from another source address.

1 41. (Previously Presented) The article of claim 37, wherein the instructions when
2 executed cause the first node to further select another path for each mobile station assigned a
3 path defined by the decommissioned address by sending a change-route request containing a
4 different IP address.

1 42. (Original) The article of claim 41, wherein the instructions when executed cause
2 the first node to send the change-route request containing an identifier of a mobile station.

1 43. (Previously Presented) An article comprising at least one storage medium
2 containing instructions for establishing communications over a network between a base station
3 and a system controller, the instructions when executed causing a first node to:
4 identify a plurality of paths in the network, each path defined by an address in the
5 base station and an address in the system controller, the first node being one of the base station
6 and system controller;
7 select one of the plurality of paths to communicate data associated with a given
8 mobile station; and
9 select another path by sending a change-route request, wherein the change-route
10 request contains an identifier of a mobile station,
11 wherein the instructions when executed cause the first node to send the change-
12 route request using a new source address, and to select the other path is-based on the new source
13 address.

1 44. (Cancelled)